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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/748,475	12/30/2003	Masad J. Damha	MGU-0025	7556

7590 06/12/2006

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EXAMINER	
CHONG, KIMBERLY	
ART UNIT	PAPER NUMBER
1635	

DATE MAILED: 06/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action Before the Filing of an Appeal Brief	Application No. 10/748,475	Applicant(s) DAMHA ET AL.	
	Examiner Kimberly Chong	Art Unit 1635	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 10 May 2006 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:
   a) ☐ The period for reply expires _____ months from the mailing date of the final rejection.
   b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

   Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
   (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
   (b) ☐ They raise the issue of new matter (see NOTE below);
   (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).
4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☒ Applicant's reply has overcome the following rejection(s): See Continuation Sheet.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☐ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

   The status of the claim(s) is (or will be) as follows:
   Claim(s) allowed: _____.
   Claim(s) objected to: _____.
   Claim(s) rejected: _____.
   Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). _____
13. ☐ Other: _____.

Continuation of 5. Applicant's reply has overcome the following rejection(s): Rejection of claims 1, 3-8 under 35 U.S.C. 103(a) as being upatentable over Wasner et al., Hannouse et al. and Denisov et al..

Continuation of 11. does NOT place the application in condition for allowance because: The rejection of claims 1 and 3-8 under 35. U.S.C. 103(a) as being upatentable over Hannoush et al. in view of Denisov et al. and unpatentable over Wasner et al., Hannoush et al. and Ray et al. are maintained. Applicant's arguments are acknowledged but are not persuasive. Applicant argues that Hannoush et al. teach hairpin loop structure comprises DNA, RNA or both wherein the loop region comprises SEQ ID NO. 1 and wherein said molecule inhibits RNase H activity and therefore incorporation of ANA to form an ANA:RNA duplex would make the molecule unsatisfactory for its intended use because an ANA:RNA duplex elicits RNase H activity and not inhibition of RNase activity. Hannoush et al. is not relied upon for teaching a molecule that inhibits RNase H activity. Hannoush et al. is relied upon, as stated in the office action mailed 1/11/2006, for teaching a hairpin loop structure comprising a tetranucleotide loop having SEQ ID NO. 1 having increased duplex stability. Hannoush et al. does not teach this molecule inhibits RNase H activity and in fact Hannoush et al. teach that this particular molecule is a useful structural motif for synthetic ribozymes and nucleic acid aptamers (see Abstract). Hannoush et al. further teach the hairpin nucleic acids comprising a tetraloop and a 2',5' linkage can form superstable hairpin structures of comparable thermodynamic stabilities and this hairpin formation may be important for the design of novel nucleic acid enzymes as well as antisense agents. Therefore, because Hannoush et al. teach a stable hairpin structure that is an important structural motif use in the design of ribozyme and well as antisense agents, one of skill in the art would have been motivated to incorporate a ANA into the hairpin structure, as taught by Denisov et al. for increased duplex stability. Applicants further state there would be no motivation to combine the teachings of Hannoush et al. with the teachings of Denisov et al. because there would be no reasonable expectation of success at arriving at a composition for inhibiting RNase H activity. MPEP 2144 states in part that "It is not necessary that the prior art suggest the combination to achieve the same advantage or result discovered by applicant." Therefore, Hannoush et al. in view of Denisov et al. were relied upon to teach a stable hairpin structure useful as an antisense agent and incorporation of ANA would further increase the duplex stability and target specificity and thus, the invention as a whole would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made. Similarly, Applicant argues Wasner et al. teach RNase H inhibitors and there would be no motivation to incorporate a PNA as taught by Ray et al. because Ray et al. teach PNA/DNA chimeras for stimulating RNase H activity. Ray et al. was relied upon to teach incorporation of a PNA into a duplex to increase stability and specificty and further because PNAs have very specific interactions with RNA or DNA making them very promising in thereapeutic applications. Applicant points to Ray et al. page 1049 for teaching a PNA/RNA chimera useful in eliciting RNase H activity. Ray et al. teach that there are 3 to 4 major applications for PNAs, one of which is that PNAs have a strong affinity for DNA and can be used to bind to DNA and inhibt antigene activity e.g. decrease protein transcription. Further, Ray et al. teach that PNAs, despite their remarkable nucleic acid binding ability, are in general not capable of eliciting RNase activity and further a PNA/RNA chimera that can activate RNase acitivy is very sequence specific wherein certain sequences have RNase activity while others do not (see page 1049). Because the instant claims are broadly drawn to inibition of RNase activity of the reverse transcriptase, one of skill in the art would be motivated to incorporate a PNA into a duplex taught by Wasner et al. to increase the duplex stability and specificity to a DNA to decrease antigene activity, such as the instantly claimed inhibition of RNase activity from retroid reverse transcriptase. Thus, the instant invention would have been prima facie obvious to one of skill in the art.